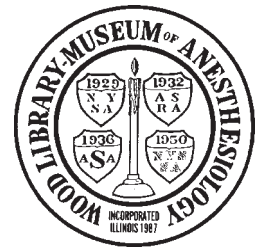




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Robert Truman Capps, Ph.D., M.D. President of the American Society of Anesthesiologists, 1983

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Moments before he had felt nervous, but now as he approached the podium, Dr. Robert Truman Capps felt a strange sense of triumph. He realized that he had reached the highest point of his rich career in organized medicine. He had just been installed president of the ASA at the second session of the House of Delegates on Tuesday, October 26, 1982, by his predecessor Dr. Louis S. Blancato. Dr. Capps

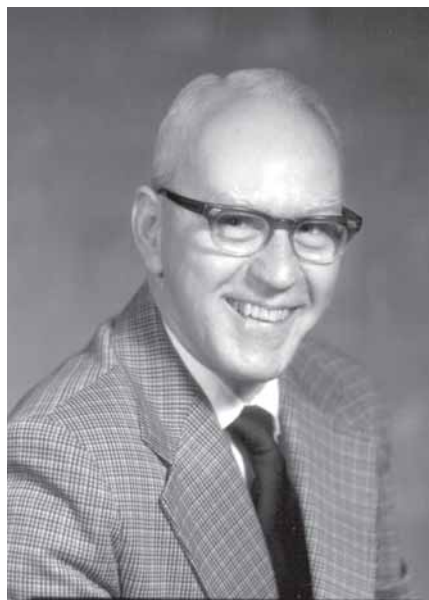


Fig. 1. Robert Truman Capps, Ph.D., M.D., was president of the American Society of Anesthesiologists in 1983. Photo is from Ms. Janet Capps.

took a deep breath and gazed briefly about the massive ballroom. Before him were seated the 227 members of the House of Delegates of *his* society, The American Society of Anesthesiologists.^a The delegates were quiet and were leaning forward in their seats anxiously waiting to hear what their new president was about to say. He pulled himself to his full height and began slowly using his crisp Midwestern accent to maximal effect.^b

crisis because each year a new crisis appeared for the Society. Some of these, not necessarily in chronological order were professional liability insurance, the suit by the Justice Department accusing the ASA of price fixing, the inquiries by the Federal Trade Commission and the controversy with the American Association of Nurse Anesthetists concerning the autonomy of their Certification Council. Now in the 1980s these crises have been replaced with *challenges* from state and federal government regulatory bodies determined to undermine the health care system and the practice of medicine, as we know it; health manpower planning, hospital cost control, HMO plans to impose fee cuts, and proposals to limit the number of practicing specialists. These interventions have made the 1980s the years of *challenge*.

Dr. Capps had a long and distinguished affiliation with the ASA. He began as a delegate from the Oregon Society of Anesthesiologists in 1967 having practiced at Providence Hospital in Portland since he left the faculty of medicine at the University of Washington, Seattle in 1960.² His practice had given him intimate familiarity with the limited availability and high premiums for professional liability insurance and that is the first challenge he discussed in his presidential address.

^aThe American Society of Anesthesiologists Inc., Roster of the 1982 House of Delegates. The actual number in attendance is not known but usually 95% are present. Available from the WLM, Park Ridge, IL.

^bQuoted portions of Dr. Capps' address to the ASA House of Delegates were edited for brevity and clarity with care not to alter the meaning of the passages. Dr. Capps covered many issues in the address. I have arbitrarily selected the three most important to discuss in this article. Deleted issues include participation in American National Standards Institute, Medicare coverage and reimbursement, payment of "honoraria" to ASA members, training of dentists as anesthesiologists, the manpower survey, and the Section on College. The unedited text can be found in the ASA Newsletter 1982;46(12):2- 8.

The 1970s were termed the years of

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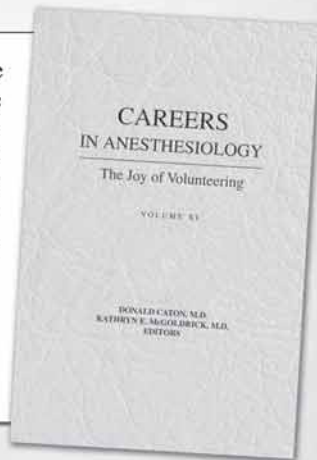
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Capps. . . *Continued from Page 1*



Fig. 2. Dr. Robert T. Capps (right) presented the "Past-presidents Scroll" to Dr. Louis Blancato at the final session of the House of Delegates in October 1982. Photograph is reproduced with permission from the ASA Newsletter.¹

One crisis of the 70s, which has become a challenge in the 80s, is professional liability insurance. It became a crisis when it was inordinately expensive and unavailable to large numbers of anesthesiologists throughout the country. That crisis has abated somewhat, although with generally much higher premiums but once again in at least two states this coverage threatens to become very costly and have limited availability. The Committee on Professional Liability has expressed frustration about the increasing magnitude of the problem and the failure of our Society to take some positive action about it. Educational programs have not been well attended and the recommendations from the faculty have not carried over into practice. Legislative changes have been enacted by several states, only to be declared invalid by the courts. No single formula has been devised that will bring physicians to do what they should to prevent liability from occurring and probably no such magic formula exists. Where then does the ASA stand on this problem?

The ASA continues to search for ways to educate its members about medical liability problems. In a related matter, some of our members feel that

technology in anesthesiology is a contributing factor in medical liability and a workshop dealing with risks and technology will be presented at this meeting.⁶ In another approach to liability, the ASA with other member societies of the Council of Medical Specialty Societies is participating in the development of a Patient Injury Prevention Program. The ASA program is to be presented at the 1983 annual meeting. With these steps I feel that the ASA is attempting to respond to the growing challenge of medical liability.

Next, Dr. Capps dealt with an issue of professionalism, the public education program of the ASA.

As you are aware, the ASA initiated a public education program in 1981, in conjunction with a public relations firm, with the aim of making the public more aware of the role of the anesthesiologist in caring for patients. Although the initial year seemed successful and the second year looked promising, the program was expanding and the cost was increasing. The revised budget from the firm represented a 28% increase over 1982. I recommend that the public education program not be continued into 1983. We have come to realize that the public at large does not know about the practice of anesthesiology and the role of the anesthesiologist in caring for patients. People most commonly learn about anesthesiology through personal experience and the experience varies directly with the performance of the person administering the anesthetic.

I contend that the anesthesiologist is the most effective public relations advocate for his specialty by talking with patients and their families about anesthesia. Such discussion on a personal basis is more effective than any media presentation, and the effect is more lasting. As a group, anesthesiologists have failed over the past few years to take the opportunity to educate people about this specialty by making perfunctory preoperative and postoperative contact with patients, or worse, none at all. In addition, either through our actions or omissions, we have also failed to convince our surgical colleagues of the significance of our role in caring for patients.

Dr Capps' solid views about professionalism came from being raised in a small Midwestern town, from service in the US Navy, from a rich background of academics and from twenty-two years in private practice. Dr. Capps was born November 3, 1920, in Ashtabula, Ohio, the son of a manufacturing engineer. He received a Baccalaureate in Pharmacy from Ohio Northern University in 1942. At the time of his graduation, the nation was fully mobilized for World War II and he joined the Navy as a Pharmacist Mate, Third Class. He was assigned to a brand new ship commissioned at Norfolk, Virginia, the



Fig. 3. U.S. Navy Pharmacist mate, Robert Capps poses with his bride Ellen in 1942. Photo is from Ms. Janet Capps.

⁶Many anesthesiologists felt that various monitors actually contributed to liability by distracting attention from important changes, which were occurring in the patient's condition. If the monitors gave abnormal values, a misguided anesthesiologist searched for malfunction in the monitor rather than searching for the cause of the abnormality in the patient.



Fig. 4. The staff in anesthesiology at University of Wisconsin in 1957 poses for a group photograph. Here are the identities. Front row: Robert T. Capps, Donald Howland, Joan Hege, Frank Hege, Allen Kinsel. Middle row: Paul Morgan, Gilberto DaCunha, Fred Cook, Sheldon Burchman, Joao Marques, Melvin Horowitz. Top row: Ruth Stoerker, Karl Siebecker, Betty Bamforth, Sidney Orth, Reinaldo Barreto, John Steinhaus, James Barbour. Assistance in the identities was provided by Drs. Mark Schroeder, John Steinhaus, Carlos Parsloe and Sheldon Burchman. Photo is from Ms. Janet Capps.

USS Chourre. While waiting for the ship to be fully outfitted, he married Ellen Louise Whims. The marriage would last a lifetime and produce three children: Dennis born in 1947, Nancy born in 1949, and David born in 1955. The ship was soon ready and loaded with repair parts for airplanes, which was to be its primary mission. The ship had a small pharmacy, for which Capps was responsible. The USS Chourre spent 18 months in Leyte Gulf, Philippines, and returned to the US in 1946 when the war ended.

After a few months working in a drug store in Ashtabula, he entered the graduate school of Pharmacology at the University of Wisconsin under Dr. Sidney Orth, who was simultaneously Professor of Pharmacology and Chairman of Anesthesiology. He completed his PhD in 1950. His thesis was on the cardiac arrhythmias during cyclopropane, ether and chloroform anesthesia.³ Inspired by Dr. Orth, he enrolled in medical school and received his MD degree in 1954. He also completed a thesis for his MD degree on cardiac arrhythmias associated with endotracheal intubation.⁴ His observations required that he spend time in the operating room collecting miles of electrocardiographic paper and admiring the activities of the anesthesiologists who expertly cared for the patients. He completed a residency in anesthesiology in 1957.

He was recruited by the charismatic Dr. Pepper Jenkins of Dallas, Texas, and he spent the next two years on the faculty of anesthesiology at University of Texas Southwestern Medical School. His goal was to establish a division of obstetrical anesthesia at Parkland Hospital which even in those days was one of the busiest delivery services in the United States. He was a perfect fit for this job because the chairman of the Department of Obstetrics and Gynecology was Dr. Jack Prichard, his roommate at Ohio Northern University

when he was in pharmacy school. Dr. Capps revised the system for keeping and sorting anesthesia records, established a system for teaching the budding science of obstetrical anesthesia to the residents, and even found time to do a little research. With Dr. Jack Gray, a resident, he published a study of electrocardiographic changes during the administration of natural and synthetic oxytocin during inhalation and regional anesthesia.⁵

The wild beauty of the Pacific Northwest attracted him to spend a year on the faculty of the University of Washington, Seattle under Dr. Lucien Morris after which he moved his practice to Providence Hospital, Portland, Oregon, in 1960. There he developed solid opinions about the duties of an anesthesiologist to the patient, and to the profession. These are constituent parts of his definition of professionalism. He reminded us that the anesthesiologist (rather than some public relations firm) is the most effective advocate for the specialty.

Dr. Capps held responsible medical staff positions which required dealing with drug-abusing colleagues. These were painful experiences for the impaired physician and the medical staff. As president of the ASA, Dr. Capps accepted the suggestion that the role of the Committee on Trace Anesthetics be expanded. He stated:

mittee on Effects on Trace Anesthetic Agents on Health of Operating Room Personnel felt that his committee should be given a broader charge. The committee concluded that the potential for drug abuse among anesthesia and operating room personnel was possibly the greatest occupational hazard in the operating room, and that by comparison the trace gas issue was minor. Rare, indeed, is the hospital staff that has not been faced with the problem of an impaired physician and, of importance to us, is the increasing number of anesthesiologists involved in such problems. In almost all areas of the country the inappropriate use of drugs by anesthesiologists and others who work in the operating room is a serious and growing problem. Your colleagues and mine are affected, not just those in the other hospital across town. Ours is a world in which potent drugs are used daily for patients under our care and we need to guarantee that the drugs obtained for patients are administered only for their needs or discarded in an appropriate manner. I propose that this be made a standing committee, renamed, 'the Committee on Occupational Health of Operating Room Personnel,' and charged with the responsibility for effects of waste gases, problems of drug abuse, and other matters relating to the health and safety of operating room and recovery personnel.

Dr. Capps concluded his remarks with a tribute to the society and one of his predecessors.

I am grateful for the confidence you have placed in me by providing me the opportunity to serve as your President in 1983. Each President-Elect at this point expresses certain special personal feelings about the Society. Dr. Jack Moyers, in 1977, capsulated my feelings about this Society in a most succinct manner, and I would like to quote from his report. He said, in part, 'I am soon to be the spokesman for a Society that has been able to develop new ideas and yet has deep seated traditions; that conducts its affairs in democratic fashion but still can delegate authority to its executive staff,

Capps. . . *Continued from Page 5*

its officers and its committees; that can handle a seven figure budget and still be concerned about a pamphlet that costs a few cents; that can plan and conduct a committee meeting for six people and an annual meeting for 7,000^d and do each in a style that is comfortable and rewarding for those concerned.' I think that says a great deal about this Society and what it represents for its members. I am proud to be a part of it. Thank you.

The response of the delegates was enthusiastic reflecting the warm respect which they held for their new president. Dr. Capps and his wife Ellen enjoyed the obligatory receptions and parties, which are held so that all important members of the society would have an opportunity to greet him and fill his ears with their pet peeves and projects. Thus, his year in the leadership role began. He did not have much time to reflect on the significance of the occasion because he was immediately busy with the affairs of the organization: decisions to be made, complaints to be answered, and travels to be accomplished.

How did his agenda work out? Thanks to the archives of the Wood Library Museum we can follow the progress of the challenges stated in his address to their conclusion or to the state of affairs in 2008.

Professional Liability Insurance

In the Annual Report of the President to the House of Delegates in October 1983, Dr. Capps states, "Professional liability problems have temporarily subsided but are still with us. One aspect of this subject is patient safety and injury prevention. Dr. Pierce will be giving more attention to this important subject as he develops his programs for next year."^e

With this statement Dr. Capps revealed the link between patient safety and professional liability. His successor, Dr. Ellison Pierce did indeed give more attention to this important subject and his efforts in



Fig. 5. Dr. Robert and Ellen Capps in 1982. Photo reprinted with permission from the ASA Newsletter.⁶

the next decade ushered in the most sweeping alteration in the daily practice of anesthesiology since its beginning. Dr. Pierce stated, "It is my belief that significant relief from ever increasing premiums for medical liability insurance will come only when the number of mishaps is significantly reduced." Under Dr. Pierce's inspired leadership, the ASA Committee on Patient safety and Risk Management proposed guidelines for machine checkout, instituted educational programs for the use of anesthesia machines and evaluated minimal monitoring equipment for anesthesia machines.⁸

In 1985, Dr. Pierce and six others incorporated the autonomous Anesthesia Patient Safety Foundation (APSF) for the purpose of encouraging activities designed to prevent patients from being harmed by the effects of anesthesia. In 1986, the ASA House of Delegates adopted the Minimum Standards for Patient Monitoring. The adoption of the Minimum Standards and the activities of the APSF initiated a profound, in fact, epochal change in the behavior of anesthesiologists. Anesthesia morbidity and mortality entered a phase of steep decline and professional liability insurance

premiums followed suit. This innovative action established the ASA as a leader in organized medical societies in the injury prevention movement. Subsequently, the AMA established an injury prevention program called the National Patient Safety Foundation (NPSF) modeled after the APSF. The most recent analysis shows that the premiums for liability insurance for anesthesiologists have fallen from \$34,791 in 1985 to \$23,481 in 2007.⁹

The challenge of availability and cost of professional liability insurance was solved by the innovative thinking of bold leaders of the ASA who had the courage to pursue their inspiration to a conclusion.

Public Education Program

The public relations program of the ASA did not have such a favorable outcome. Dr. Capps recommended that the program be discontinued because it was costly and ineffective. In a dramatic demonstration of democracy in action, the House of Delegates disagreed with Dr. Capps. The House voted to continue the program with a lower budget, a new Public Relations firm and a new campaign aimed not at the public in general but rather at the society's membership and its professional colleagues—surgeons, internists and hospital administrators. In 1985, a consultant was employed to discover if the public relations program had any effect. The consultant concluded, "The man on the street in this country is not the least bit concerned about anesthesiology, let alone anesthesiologists." In addition, the study revealed that congressmen, senators, and bureaucrats in Health and Human Services have attitudes very similar to the general public. In 1987, a smaller program aimed at legislators and bureaucrats was initiated, which led ultimately to the annual ASA Legislative Meeting yearly in Washington.¹⁰



Fig. 6. Robert T. Capps, M.D., (right) presents the "President's Gavel" to Ellison C. Pierce Jr., M.D., at the final session of the 1983 ASA House of Delegates. Photo is reprinted here with permission from the ASA Newsletter.⁷

^dDr. Moyers based his remarks on the attendance figures for the 1975 annual meeting. The attendance at the 1982 Annual Meeting where Dr. Capps was installed as president was 9,025. Attendance grew progressively for the next 24 years and was 18,497 in 2006. Please see www2.asahq.org/web/miscfiles/07past.asp.
^eItem 411-4, page 1, President's Annual Report, 1983 House of Delegates, Available from the archives of the Wood Library Museum, Park Ridge, IL.



Fig. 7. Dr. Capps is retired and lives with his wife, Ellen, in Portland, Oregon. Photograph is from Janet Capps.

Occupational Health of OR Personnel

In reflecting on his many accomplishments as president of the ASA, Dr. Capps stated that calling the society's attention to the problem of drug abuse in operating room personnel may have been his most important contribution. He recognized that chemical dependence is a devastating and potentially fatal disease, that recognition is difficult until the disease is far advanced and that recognition and treatment are mandatory to save the life of the addict and prevent injury to patients. As a result of his clarion call, educational programs were instituted, intervention protocols were established, programs for rehabilitation were expanded and improved, and criteria for restoration of recovering anesthesiologists to practice were refined. Progress has been significant. Lives have been saved. The prognosis for long term recovery for most addicted anesthesiologists can be excellent. The educational initiative by the Committee on Occupational Health of Operating Room Personnel was greatly enhanced by the production of a videotape entitled, "Unmasking Addiction: Chemical Dependency in Anesthesiology."¹¹ Sadly, although recognition is prompter, interventions are more successful, and rehabilitation is improved, the problem is not solved and is still with us. The necessary ingredients are a genetic susceptibility, which is manifest by an overwhelming urge to use a drug, and the availability of the drug. These ingredients are present in 2008 just as they were in 1982.

Summary

Robert Truman Capps, Ph.D., M.D., became president of the ASA in 1982. His year was very successful and highly eventful. He formulated decisions and policies based on sound fundamental values de-

rived from a solid background of a stable family in a small Midwestern town, education in pharmacy in a small liberal arts college, service in the US Navy in World War Two, postgraduate and medical education at the University of Wisconsin, and training in anesthesiology at the same institution. He had teaching experience at the University of Texas Southwestern Medical School, Dallas and University of Washington, Seattle. He had twenty-two years of private practice experience in Portland, Oregon. From his list of many accomplishments, three are discussed here: professional liability insurance and the link to patient safety, the public education program of the ASA, and chemical dependence in anesthesiologists.

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An 1829 Eyewitness Account of Hypnotic Anesthesia in Major Surgery

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Hypnosis (conceptually descended from its historical antecedents: animal magnetism and mesmerism) evolved during the time of the Enlightenment, a powerful historical movement that originated in France where it ushered in major socio-cultural and scientific developments. The latter included the early understanding of the influence of the mind over matter and the spirit over the body. Within that context, the then-novel application of hypnosis (i.e., mesmerism) as surgical anesthesia may be viewed as an important historical chapter in the continual struggle between the forces of tradition on one hand and enlightened innovation in medical thought and practice on the other. In a sense, hypnotic anesthesia was a modality whose time had come. It met the need of an increasingly intellectual and curious society for a way to assist patients undergoing surgery at a time when such procedures were painful for all and a fatal experience for many (Dormandy, 2006).

One impact of the Enlightenment was that it exposed contemporary Western medical science to the then-radical notion of enabling individuals to participate in their own treatment. This eventually led to the grudging acceptance of hypnosis as a form of treatment for a variety of disorders; indeed, the Enlightenment also established the cultural and intellectual basis for the rise of modern dynamic psychology and psychotherapy (Ellenberger, 1970). Because the Enlightenment evolved from the past, while confronting the present

and anticipating the future, there ensued inevitable cultural and scientific conflicts. One of the latter was the struggle within the medical establishment concerning the radical theories of Franz Anton Mesmer (1734-1815) that were based on the science of the time and, as he acknowledged, the prior work of Sir Isaac Newton (Ellenberger, 1970). Newton, in his classic 1687 *Principia* (1999/1687), had written of a subtle fluid that pervades all aspects of life, a concept that Mesmer later embraced in evolving his own theory of an invisible vital magnetic fluid responsible for health and sickness (Mesmer, 1779).

The utilization of hypnosis (then known as animal magnetism and mesmerism)² as surgical anesthesia was first briefly noted in 1797 (Gravitz, 1988). While a few additional accounts of such procedures appeared over subsequent years, documentation of these early cases was sparse and typically absent, especially in English-language publications; indeed, nearly all of these early reports were of limited value because they lacked descriptions of what had transpired during the process (Gravitz, 1988).

We have recently located a detailed early account which describes one of the most impressive of such historic surgeries and includes the first eyewitness report of the procedures employed (Colquhoun, 1833). That documented case occurred on April 12, 1829, fourteen years following the death of Mesmer. On that historic date, Jules Cloquet (1790-1883), a well-regarded Parisian surgeon, performed a mastectomy on a 64-year-old female patient, one Madame Plantin, whose right breast had previously been diagnosed as cancerous. Only hypnotic anesthesia, essentially a verbal psychological technique, was employed throughout the operation, because chemical anesthesia had not yet been developed. The specifics of technique utilized by the hypnotist-physician in that case, Pierre-

Jean Chapelain, were not described, although they were likely to have been those typically employed in those early days: direct suggestion, in this case for insensitivity to pain. In modern times, that would be termed post-hypnotic suggestion, and it is a frequently utilized technique in today's medicine. The surgery was performed several days after Cloquet had been first consulted about Plantin's condition on April 8, 1829 (Cloquet, 1829). The relatively rapid sequence of events suggests that the patient's condition was by then considered to be an emergency.

Cloquet subsequently undertook to present an account of the successful operation to the Section on Surgery of the French Royal Academy of Medicine on April 16, 1829 (Sim, 1998). That esteemed body had previously been receptive to mesmerism. Henri-Marie Husson (1772-1853) had served as the chair of an Academy commission established in 1826 that had conducted pioneering investigations of animal magnetism over a five-year period. It was concluded that the modality was authentic and therapeutically useful (Husson, 1831). Even earlier, Jose Custodio de Faria (1819) had been one of the first to emphasize the role of auto-suggestion as a therapeutic agency. Despite those positive developments, however, ambivalence and resistance in the medical establishment persisted, although there were some who recognized the implications of Cloquet's work. Among the latter was the eminent British physician, John Elliotson (1791-1868), an early supporter of hypnosis and a strong critic of those medical colleagues who accused Plantin of having been a fraud (Elliotson, 1843).

While the Academy to its credit appointed a committee to study the Plantin case and its implications, the patient's family was uncooperative and declined to permit the committee to meet with her. Also, while acknowledging that the surgery had

¹*Animal magnetism was a theory first developed in his 1766 medical dissertation by Franz Anton Mesmer (1734-1815), who maintained that there existed in all living entities a bio-physical fluid that mediated health and sickness. Since then, the nomenclature has evolved from that to mesmerism, hypnotism, suggestive therapeutics, and others, as well as the currently preferred term of hypnosis. The latter is used in this article for modern consistency.*

been accomplished, certain of the Academy's members maintained that Plantin had faked her insensibility to pain during the surgery and that Cloquet himself was either an imposter or a dupe. In such criticism, these dissidents overlooked the logical possibility that there was a force within the patient that facilitated, if not enabled, her to withstand the significant trauma and pain of this major surgery. Many more years were to elapse before the symbiotic link between the mind and body began to be acknowledged and accepted by the scientific medical community (Ellenberger, 1970).

The Academy consequently refused to publish specifics of Cloquet's case; Although limited copies of a brief lithographed report were instead circulated to Academy members, these were not given wider circulation and have been lost to history. Soon thereafter, as was reported by Alexandre J. F. Bertrand (1829) in a brief note, the patient died on April 28, 1829, apparently of pneumonia associated with pericarditis. Perhaps because the Academy was then already being criticized for its interest in hypnosis, further consideration of the case by that esteemed body was discontinued at that time. Yet, the case of Madame Plantin served as a stimulus for the consideration of hypnosis and other psychological factors in surgery, leading eventually to further work in Europe and elsewhere. For example, the strong rise of interest in hypnosis in France in the 1860s was clearly associated with its successful use there in a number of impressive surgical procedures, including the Plantin case, as also occurred in the United States and elsewhere (Gravitz, 1988).

Several years later, John C. Colquhoun (1785-1854), a respected Scottish contemporary authority on hypnosis, wrote a report of the Plantin surgery that may have been based on the unpublished lithographed account that was issued by the Academy in limited numbers, since it contained details that were available only to eyewitnesses at the time (Colquhoun, 1833).

Colquhoun's historically important account was later noted in the *London Medical and Surgical Journal* of 1833 and was the first report other than the French Academy's of that landmark event. Because it is available nowhere else, it is reprinted in its entirety in English below:

Upon the day fixed on for the operation, M. Cloquet, arriving at half-past ten in the morning, found the patient dressed and seated on an elbow-chair, in the attitude of a per-

son enjoying a quiet nocturnal sleep. She had returned about an hour before from mass, which she attended regularly at the same hour. Since her return, M. Chapelain had placed her in a state of magnetic sleep, and she talked with great calmness of the operation to which she was about to submit. Every thing having been arranged for the operation, she undressed herself, and sat down upon a chair.

M. Chapelain supported the right arm, the left was permitted to hang down at the side of the body. M. Pailloux, house pupil, of the hospital of St. Louis, was employed to present the instruments, and to make the ligatures. A first incision, commencing at the arm-pit, was continued beyond the tumour as far as the internal surface of the breast. The second commenced at the same point, separated the tumour from beneath, and was continued until it met the first; the swelled ganglions (ganglions egorges) were dissected with precaution on account of their vicinity to the axillary artery, and the tumour was extirpated.

During all this time the patient continued to converse quietly with the operator, and did not exhibit the slightest sign of sensibility. There was no motion of the limbs or of the features, no change in the respiration nor in the voice, no emotion even in the pulse. The patient continued in the same state of automatic indifference and impassibility in which she was some minutes before the operation. There was no occasion to hold, but only to support her. A ligature was applied to the lateral thoracic artery, which was open during the extraction of the ganglions: the wound was united by means of adhesive plaster, and dressed. The patient was put to bed while still in a state of somnambulism, in which she was left for forty-eight hours. An hour after the operation, there appeared a slight haemorrhage, which was attended to with no consequence. The first dressing was taken off on the following Tuesday, the 14th, - the wound was cleaned and dressed anew - the patient exhibited no sensibility nor pain - the pulse preserved its usual rate.

After this dressing, M. Chapelain awakened the patient, whose somnambulant sleep had continued

from an hour previous to the operation, that is to say, for two days. This lady did not appear to have any idea, any feeling of what had passed in the interval; but upon being informed of the operation, and seeing her children around her, she experienced a very lively emotion, which the magnetiser checked, by immediately setting her asleep.

Discussion

Madame Plantin was not a novice to hypnosis when she responded so impressively to Chapelain's hypnotic induction and Cloquet's complex surgery. Chapelain had been her personal physician for a lengthy period prior to the surgery, and he had previously employed hypnosis repeatedly in a vain attempt to treat her cancer. It was only after this proved to be ineffective that Cloquet was consulted and the surgery performed. Cloquet, a product of the Enlightenment, was a renowned Parisian surgeon, anatomist, inventor of surgical instruments, and early French acupuncturist. He was receptive to innovative procedures, including in this instance, hypnosis.

Modern research has demonstrated that repeated hypnotic inductions, as in the Plantin case, result in increased effectiveness (e.g., Hilgard & Hilgard, 1975); consequently, it is not surprising that she responded so well. Furthermore, it is now known that the deeper the hypnosis, the more effective is the anesthetic effect, as was the case in this surgery (e.g., Hilgard & Hilgard, 1975). It is also known today that, despite their apparently insensitive clinical appearance, hypnotized subjects can be well aware of their surroundings, and they can speak and otherwise react without alerting. Modern hypnosis patients frequently exhibit the "automatic indifference and impassibility," as well as a lack of overt response to painful stimuli as was described in the Plantin case.

Today, it is known that hypnotic subjects can exhibit behavior designed, perhaps in part unconsciously, to respond to their inner, even unconscious, personal needs and to the so-called demand characteristics of the situation (Hilgard, 1965). Since Plantin's surgeon, Cloquet, had the reputation of being a noted practitioner, this was also likely to have been an important reinforcing factor. All of these could have been positive reinforcing factors in Plantin's responses during the surgery, in addition to which she undoubtedly was motivated to be cured of her malady. That

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Hypnosis. . . *Continued from Page 9*

she was kept in a "somnambolic" (i.e., hypnotic) state for 48 hours post-operatively is itself now known as not very remarkable, for hypnotic subjects have been observed to be able to maintain their hypnosis for days at a time, provided they are administered reinforcing post-hypnotic suggestions. Likewise, post-hypnotic amnesia, as was reported in the Plantin case, is typically observed in superior hypnotic subjects, who also tend to maintain insensitivity to pain better than the average patient (Hilgard, 1965).

Summary

With hypnosis as the sole anesthetic agent, a 64-year-old woman, one Madame Plantin, underwent major surgery in Paris in 1829 to remove her cancerous right breast. Her surgeon was the noted Jules Cloquet, and Pierre-Jean Chapelain was the physician-hypnotist. This classic case occurred at a time in medical history when there were no effective chemical anesthetics, and surgery especially for a serious condition

such as this was likely to have been a death warrant. The successful use of hypnotic anesthesia at that time served as a stimulus for the future understanding of the role of psychological factors in health care.

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The C. Ronald Stephen Resident Essay Contest

The Anesthesia History Association (AHA) sponsors an annual contest for the best essay on the history of anesthesia, pain medicine or intensive care. This contest is open to all residents and fellows in anesthesiology. The purpose of the contest is to promote interest in the history of anesthesia and to advance professionalism in the specialty. Additionally this contest offers residents and fellows the opportunity to present their paper at a national meeting and to publish the results of their research. The Resident Essay Contest is named for Dr. C. Ronald Stephen an anesthesiologist who was a revered teacher, researcher, clinician and anesthesia historian. Dr. Stephen died at age 90 in 2006.

The essays must be written in English and be approximately 3,000 to 5,000 words in length. Judging will be in two stages. In the first stage the finalists will be chosen. These finalists will be announced at the AHA dinner meeting during the American Society of Anesthesiologists annual meeting. From these finalists, the winners will be chosen on the basis of both content and delivery during the spring meeting of the AHA. All the finalists will present their papers in a session of the AHA attended by a panel of judges. The panel of judges will make their final decision based on originality, appropriateness of topic, quality of the research, and delivery. Because the final judging will be at the time of the presentation at the spring meeting of the AHA, all who enter must agree to attend the meeting at which the presentations are made. Essays must be submitted by the 10th of September 2009, in order to be eligible for presentation at the spring AHA meeting of the following calendar year. If not received by that date they will be considered for the next year's contest.

The first, second, and third place winners receive \$500 \$200 and \$100 respectively. Awards will be made during the AHA spring meeting. The three winners are required to submit their essays to the peer-reviewed Bulletin of Anesthesia History for possible publication.

To enter, essays should be sent to:

William Hammonds, MD, MPH
 Professor, Department of Anesthesiology and Perioperative Medicine
 Medical College of Georgia
 1120 15th Street
 Augusta, GA 30912
 whammonds@mccg.edu

Entries must be received on or before September 10, 2008

Remembering a Standard-Bearer: “D-Day Doctor” and Professor of Anesthesiology, Leslie Rendell-Baker, M.D., F.R.C.A., (1917-2008)

by George S. Bause, M.D., M.P.H.

Honorary Curator

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From Lancashire to London (1917-42): Engineering a Medical Career

Born on March 27, 1917, in St. Helens, England, Leslie Rendell-Baker seemed destined to join the two previous generations of Rendell-Baker men who had worked in County Lancashire as electrical engineers. When the family moved to County Yorkshire, Leslie continued his early grammar schooling there. In both counties, he revelled in disassembling appliances or, as he told me, “exploring the workings.” Left literally to his own devices, Leslie certainly could have pursued a career in engineering. However, fearing the nationalization of power utilities, his father and three uncles redirected young Rendell-Baker towards a medical career. After graduating from boarding school at Harrogate’s Ashville College in 1936, Leslie matriculated at the Guy’s Hospital Medical School of the University of London.¹

Three years later, on September 1, 1939, Hitler invaded Poland. Two days after that, Britain declared war on Germany. Wartime forced the transfer of elective surgeries to the countryside, leaving medical students like Leslie with dwindling surgical caseloads to anesthetize in London. To remedy this shortfall, Leslie forsook the capital for Orpington Hospital, about 14 miles to the southeast. There twice weekly for three months, he used the future “Mapleson A” circuit on adult male genitourinary surgical cases, delivering oxygenated nitrous oxide and chloroform as chasers to a formulaic 500 mg Pentothal induction. His “interest in Anaesthetics” was piqued after one of his inductions resulted in 15 minutes of patient apnea. Serving as a surgical house officer after graduating from medical school in April of 1941, Rendell-Baker’s “occasional anaesthetist duties” were often supervised by Hospital Anaesthetist William W. Mushin, Leslie’s future co-author. Mushin’s disciple would complete his internship and join the military as Leslie



Fig. 1. Leslie Rendell-Baker, M.D., F.R.C.A., (1917-2008). From the Leslie Rendell-Baker Collection of the Wood Library-Museum of Anesthesiology, Park Ridge, Illinois.

Rendell-Baker, M.B., B.S. (Lond.), L.R.C.P., M.R.C.S. (Eng).²

Scotland, Wales, England... France, Belgium, Holland, Germany (1942-45): D-Day & the RAMC

From July of 1942 through December of 1946, Rendell-Baker served as a Captain in the Royal Army Medical Corps. From his single Field Ambulance crew in the Guards Armoured Division on England’s Salisbury Plains, two Field Dressing Stations (FDS) were formed. These were reassigned northwest in the spring of 1943 to the Scottish seaside. There in County Ayrshire, during duty hours, Leslie’s unit, now known as the No. 21 FDS, practiced for D-Day by invading the

west coast of Scotland. When off-duty, Leslie practiced bicycling to Prestwick, six miles up the coast to visit “a certain Scots lass,” his future wife, Rosemary Carr Hogg.¹

Following coastal deployments to Amroth in Wales’ County Pembrokeshire and then 300 miles east to Dover, Leslie weathered a bitterly cold Christmas in 1943 storming Gullane Sands, less than 20 miles east of the Scottish capital, Edinburgh. His unit was part of the 5,000-man No. 5 Beach Group. After finally transferring the “ton of tons” (2,000 tons) of supplies demanded from each Beach Group, the No. 5 was shifted to the southern coast of England for a final flurry of springtime practices.

Leslie’s No. 21 FDS was just one portion of a MASH-like Forward Surgical Unit for the No. 5 Beach Group. As the RAMC planned, battle casualties with minor injuries would be triaged, bandaged, and either returned to action or to home. The Forward Surgical Units were placed near military action to treat “the belly, brain, and breathing cases”—soldiers with significant abdominal, neurosurgical, and/or chest trauma.

On June 5, 1944, army cooks doled out corned beef and potato salad for what Leslie dubbed “an inappropriate Last Supper” before his No. 21 FDS shipped out at 3:00 pm. Through that evening, the English Channel was so choppy that Rendell-Baker and most of his unit became seasick. Leslie would muse later that “only the Channel was well-fed that night.”

The seaborne assault on Queen Red Beach began at 7:30 am on June 6, 1941. One hour later, a 14-man vanguard from Leslie’s group had begun establishing a Beach Dressing Station in a mortar pit. In another three hours, the 60-man balance of No. 21 FDS, including Leslie, were dis-

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Fig. 2. RAMC Captain Leslie Rendell-Baker's copy of Corporal Hatswell's charcoal etching of their noontime disembarkation from Landing Craft Infantry No. 423 on D-Day at Queen Red Beach in Hermanville-LaBreche, Normandy. From the Leslie Rendell-Baker Collection of the Wood Library-Museum of Anesthesiology, Park Ridge, Illinois.

embarking hastily from Landing Craft Infantry (LCI) No. 423.¹ (See Figure 2.)

The charcoal etching captures the perspective of those still onboard LCI No. 423. Note, the soldier passing the stretcher off the LCI. "Captain Baker" – our Leslie—was thrilled that he and his men had water less than two feet deep through which to wade. Because German 88-mm guns had just struck the vessel next to them, the men of No. 21 FDS were rushing ashore. On fire at the waterline, an amphibious assault tank lay burning. In the distance tottered shoreline buildings "swiss-cheesed" by bombardment the Allies had hoped would soften German defenses. A nursing orderly who sketched this hectic scene several days after D-Day, Hatswell had worked as a commercial artist before his duties as one of his unit's eight corporals onboard LCI No. 423.³

The No. 21 rapidly set up their Field Dressing Station in a neighboring orchard. Having squirreled away ampoules of Pen-tothal and homemade bandage kits before departing England, the physicians of No. 21 FDS now faced their daunting D-Day assignments. Superior officers had already issued stimulant Benzedrine tablets to FDS personnel to help them fight the long, fatiguing hours of triaging and patching up injured combatants. Along with its twin, the No. 20 FDS, Leslie's No. 21 handled 1,025 casualties and evacuated 1,700 patients—all during the first three days of fighting. When only sedation was required, incoming wounded "took a nip" of whiskey from the personal canteens of many of their "D-Day doctors." As Leslie observed, whiskey was "a good rudimentary sedative for casualties suffering from battle stress."¹

Battle stress figured strongly in the next mission for Leslie's FDS. Surprisingly large numbers of Allied troops began suffering "shell shock," following days of round-the-clock bombardment by the Germans. During the first month at Normandy, the nearby town of Caen had somehow remained in German hands. When German anti-aircraft flak greeted incoming Lancaster Fighter-Bombers of the RAF 500 Squadron, Leslie and his unit witnessed a "hellishly beautiful" Allied siege of the town of Caen. As the Germans retreated, Leslie would find himself working in Northern France, in Belgium, in Holland, and finally in Germany.¹

British Army on the Rhine Hospitals (1945-46): Military Anaesthetics Training

With the European conflict ending, Leslie did not relish the prospect of continuing as a general military physician and possibly storming dozens of beaches on Japanese-controlled islands throughout the Pacific. One D-Day had been plenty. Consequently, Capt. Rendell-Baker answered an appeal seeking RAMC physicians interested in anesthetic training. In August of 1945, he began his specialist training in anesthesia in "the British Army on the Rhine Hospitals."

At the 29th British General Hospital in Hanover, Germany, Leslie worked at a 1200-bed facility for three months with a RAMC specialist in anesthetics, Major Steele-Perkins. Unfortunately, when Steele-Perkins returned to England, his replacement was a marginal instructor in anesthesia. Fortunately, at least during the Christmas holidays of 1945, Leslie was

permitted to swap stations with an American anesthesiologist at Degerndorf in Bavaria. There at the tiny 112th Evacuation Hospital, Rendell-Baker explored the well-stocked inventory of anesthetic apparatus and the generous number of anesthesia textbooks and medical journals in the American hospital's library.¹

With his military obligations running out, Leslie managed to connect with Guy's Hospital for follow-up civilian anaesthetics training. He also reconnected with his fiancée. Returning to Ayr, Scotland, on August 17, 1946, Leslie married Rosemary. By December of 1946, he was honorably discharged from the RAMC.

Guy's Hospital, London (1946-48): Civilian Anaesthetics Training

As one of eight servicemen discharged to Anaesthetics training at Guy's Hospital, Rendell-Baker was quizzed weekly by Director Archibald Marston in preparation for oral examinations for the Diploma in Anaesthetics (D.A.) oral examination. Rather than delivering anesthetics as the "sole hands-on anaesthetist," Leslie's registrar role required that he supervise medical students and make "sure the patients survived the students' tender mercies." Since the students were not allowed to curarize patients—Leslie ended up failing his first oral exams, which stressed the use of curare and the use of cyclopropane. Besides augmenting his clinical experiences with curare to better prepare for his orals, Rendell-Baker made a point of purchasing an anesthesia machine for his personal clinical practice in cyclopropane anesthesia.¹

Most pediatric anesthetics at Guy's were conducted as open-drop cases with ethyl chloride and ether. Except in one room devoted to cardiothoracic surgery, there was a dearth of pediatric facemasks, connectors, and breathing systems. Also missing were pediatric laryngoscopes, endotracheal tubes, and resuscitation equipment.

In fact, Rendell-Baker's finest clinical experiences at Guy's with pediatric anesthesia began in July of 1947, when the first of eight Tetralogy of Fallot cases arrived for "blue baby" operation by a visiting professor of cardiac surgery, Dr. Alfred Blalock from Johns Hopkins. After completing eight Blalock-Thomas-Taussig shunts, Blalock complimented Rendell-Baker and the rest of the Guy's anaesthetists for having curarized the eight "blue babies" and controlled their intraoperative ventilation.²

Welsh National School of Medicine,

Cardiff (1948-56): Connections, CARS & Co-authorship

Finally passing exams for his D.A. also meant that Leslie had to search for a job. He was delighted to apply for a registrar anaesthetist position in Wales with William W. Mushin, who had supervised Leslie at Guy's back in 1941. As Mushin's new Senior Assistant, Rendell-Baker ran clinical anesthesia services for all eight of Cardiff's hospitals. Most of these sites were woefully short of proper anesthetic apparatus, especially for pediatric cases. On one thoracic case, after Leslie had suctioned a makeshift T-piece breathing system that he had assembled, his neonatal patient had extubated and died on the table. In Leslie's typical pragmatic fashion, he attacked the problem head-on, collaborating in the departmental workshop with Kenneth Hillard, Mushin's hand-picked technician. Their teamwork produced the Cardiff series of light-weight pediatric suction attachments.⁴

In 1953 Rendell-Baker initiated CARS, the Cardiff Anesthetic Record System. For CARS, anesthesia records were coded by hospital record managers. The coded records were then processed by university statisticians using a Hollerith punch card sorter. Ironically CARS revealed that, patients that had been anesthetized with earlier inhalational anesthetics (with volatile agents) had lower postoperative morbidity than those anesthetized with the more recent nitrous-narcotic techniques.⁵

In Cardiff the Mushins and the Rendell-Bakers paired off. The wives practiced Scottish country dancing; the husbands collaborated on writing an anesthesia text. The latter pursuit resulted in the 1953 publication of *The Principles of Thoracic Anaesthesia, Past and Present*. (Six years later, Drs. Mushin and Rendell-Baker would collaborate on a second textbook, the first of three editions of *Automatic Ventilation of the Lungs*.)

University of Pittsburgh (1955-56): A Fulbright Scholar to Foldes

Following his Christmas of 1945 tour in Bavaria to that well-equipped American 112th Evacuation Hospital, then RAMC Capt. Rendell-Baker had determined that he would beat an academic pathway to the United States. After competing successfully against other international scholars, Leslie was appointed Fulbright Visiting Assistant Professor to the University of Pittsburgh, Pennsylvania, for 1955-56. There on "the Bluff" high above the Monongahela River, Leslie collaborated with Dr. Francis Foldes at Mercy Hospi-

tal.

From 130 miles to their west, Professor Robert Hingson of Western Reserve University soon invited Foldes and his new Fulbright Scholar to visit Cleveland, Ohio. With Foldes, Hingson reviewed an investigational local anesthetic's potential use for caudal epidural anesthesia; with Rendell-Baker, Hingson discussed Leslie's availability for an academic appointment to Western RU.

Western Reserve University, Cleveland (1957-62): Z-79 Standards & RBS Masks

In May of 1957, Hingson celebrated the Cleveland arrival of WRU Assistant Professor Leslie Rendell-Baker. Two of Leslie's academic seniors, Associate Professors Hamilton Davis and Henry Kretchmer served on Committee Z-79 of the American National Standards Association



Fig. 3. Donald H. Soucek, D.D.S. (left) points to the Rendell-Baker Soucek (RBS) mask held by Leslie Rendell-Baker, M.D. From the Leslie Rendell-Baker Collection of the Wood Library-Museum of Anesthesiology, Park Ridge, Illinois.

(ANSA). They encouraged Leslie's involvement in their national campaign to standardize anesthetic apparatus. Rendell-Baker would lead the effort to convert pediatric breathing systems to sequential 15mm-diameter male-female fittings.

Different manufacturers supplied anesthesiologists in 1957 with two, three and four pediatric fitting systems, respectively, for breathing tubings, endotracheal tube connectors, and facemask fittings. These items resisted interconnection with each other or with adult fittings. To worsen matters, a new pediatric surgeon was demanding general anesthetics by facemask

for his youngest hernia patients. WRU's anesthesiologists realized quickly that their pediatric cases were imperiled by the poor fit and the needless dead space of available facemasks. Rendell-Baker's initial answer, his homemade hammered-aluminum facemasks, actually did reduce the dead space, but their firm fit flattened noses on his young patients.²

To solve the problem, Leslie collaborated with one of his WRU anesthesia residents, dentist Donald Soucek. (See Figure 3.) Mimicking techniques for fashioning dentures, Soucek made intraoperative castings of faces of children who had been intubated for their general anesthetics. Later from these, wax molds were fashioned. With little dead space, the latex masks from these molds fit children's faces remarkably well. Dead space was also minimized by allowing mask seal from the child's own soft facial tissues rather than from an inflatable cushion.^{6,7}

To allow easily visualized monitoring of tidal exchange and facial fit, Rendell-Baker produced clear latex mask prototypes in sizes 0, 1, 2, and 3 for, respectively, prematures, neonates, 2-3 year olds, and 3-6 year olds. Leslie always sounded perturbed to me when he described how "misguided manufacturers" opted for opaque rubber RBS masks, even though nonflammable anesthetics no longer required use of black conductive versions. Each RBS mask included a 22mm-diameter female fitting designed to connect, in an emergency, to adult breathing systems. Rendell-Baker would pioneer efforts to standardize 15mm and 22mm fittings and to interconnect them.^{6,7}

Mt. Sinai Hospital, New York (1962-79): ANSA, FDA & ANSI Standards

The year 1962 brought three titles to Rendell-Baker as he shifted his academic ties from Cleveland to New York City: Director of the Department of Anesthesiology at Mt. Sinai Hospital, Chairman of ANSA Committee Z-79 (1962-68), and U.S. citizen. In 1964, 1965, and 1968, Rendell-Baker designed installations for, respectively, Mt. Sinai's hyperbaric chamber, first ICU, and new surgical suites. At nearby Columbia and eventually at Mt. Sinai School of Medicine, Rendell-Baker taught as a professor of anesthesiology.⁸

From 1968-79 Leslie served as Vice Chairman of the Z-79 Committee of ANSA. During his 17 years leading Z-79 as chair and then vice-chair, standards were formulated for safety in surgical suites and

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operating rooms, for sterilization by ethylene oxide, for the layout and safety features of anesthesia gas machinery, and, most famously, for "non-toxic tracheal tubes." From 1972-76, the Food and Drug Administration tapped Rendell-Baker to chair its Anesthetic Devices Classification Panel. From 1975-79, Leslie served as a Director of the American National Standards Institute (ANSI). On his retirement in 1979, Mt. Sinai honored him as a professor emeritus.

Loma Linda University (1979-2008): Standards for AAMI & ASTM

After retiring from Mt. Sinai in 1979, Leslie moved to Redlands, California. There he served as a staff anesthesiologist to the Jerry L. Pettis Memorial VA Hospital associated with Loma Linda University. This was the beginning of Rendell-Baker's final teaching stint, as a professor of anesthesiology at Loma Linda University. As the new co-chairman of the Human Engineering Committee of the Association for the Advancement of Medical Instrumentation (AAMI), Rendell-Baker freely noted how much his early recommended standards had been patterned after ones he had seen prove effective in military and V.A. hospital settings. In 1981 Leslie became a founding member and chairman of Subcommittee D10.34 of the American Society for Testing and Materials (ASTM). This group standardized color-coding and legibility for vials, ampoules, and syringe labels.

My casual contacts with Leslie began back in 1987 with my curatorial work at the ASA's Wood Library-Museum of Anesthesiology. WLM Trustee Rod Calverley had encouraged his fellow Californian, Rendell-Baker, to collaborate with the WLM on exhibits. For most of the past 15 years, Leslie generously shared his expertise with me, contributing not only to several WLM annual exhibits but also to posters at most of the International Symposia on the History of Anaesthesia. In 1998 Loma Linda University proudly saluted Rendell-Baker as an emeritus clinical professor. From then on, Leslie focused on the history of anesthesia, on traveling the world, and on his favorite avocation, photography.^{9,10,11}

During his final decade-long struggle with Parkinson's disease, Leslie was fortified by four loving women—his wife Rosemary, and his daughters Sheila, Helen and Nelda. Near the end, Leslie could manage to sit in a chair and to vocalize, but he

could not clearly enunciate or write words. I count myself privileged in having received one of Professor Rendell-Baker's final teaching lessons, as he turned my camera over and over and gestured knowingly towards several buttons and controls. But, of course, I am not alone. From seven teaching centers on two continents, three generations of medical students and post-graduates can testify to Leslie's love of teaching.

When Dr. Rendell-Baker passed away on August 11, 2008, the medical profession lost a standard-bearer. From 1942-46, through Scotland, Wales, England, France (including the D-Day invasion of Normandy), Belgium, Holland, and Germany, Capt. Leslie Rendell-Baker carried high the standard of the Royal Army Medical Corps. Subsequently, as a civilian anesthesiologist, Leslie set standards nationally for apparatus and for labeling that today are observed by healthcare workers worldwide. Yes, with the passing of Professor Rendell-Baker, our standard-bearer has fallen. Let us all raise our standards ever higher in memory of Leslie Rendell-Baker!

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Lewis H. Wright Memorial Lecture: Jerry A. Dorsch, M.D., and Susan E. Dorsch, M.D., to present *'Beyond Blue Lips: Advances in the Prevention of Hypoxia'**

by Susan A. Vassallo, M.D., Chair

Lewis H. Wright Memorial Lecture Committee
Wood Library-Museum of Anesthesiology

This year's distinguished guests are Jerry A. Dorsch, M.D., Associate Professor Emeritus, Mayo Medical School, Mayo Clinic, Jacksonville, Florida, and Susan E. Dorsch, M.D., Jacksonville, Florida.

Jerry and Susan are the sole authors of the classic textbook, *Understanding Anesthesia Equipment*, now in its fifth edition (2008). They have devoted their careers to explaining the mechanics of anesthesia machines, ventilators, vaporizers, and monitoring devices in a comprehensive and orderly fashion. Generations of anesthesia residents and student nurse anesthetists have relied upon this book during their training and it also has served as a reference resource for senior clinicians.

Over the book's 33-year publication history, their fascination with anesthesia devices has never faded, and now the names "Dorsch and Dorsch" are synonymous with "our equipment."

Jerry and Susan grew up in Wheeling, West Virginia. They met during the summer before Jerry's first year of medical school and Susan's senior year of college. They both graduated from West Virginia University School of Medicine and were married in 1967. Jerry completed an anesthesia residency and critical care fellowship at the University of Pittsburgh and Susan completed an anesthesia residency at Mercy Hospital in Pittsburgh. During Jerry's first year of residency, they attended their first major anesthesia meeting in Miami, which focused on "Complications in Anesthesia." At a panel titled "Complications of Equipment" they were surprised and appalled at how little the panel members really knew about anesthesia equipment. When they asked themselves, "Where do you look for this information?" they recognized the need for one complete reference source dedicated to only anesthesia



Jerry A. Dorsch, M.D., and Susan E. Dorsch, M.D.

equipment. Hence arose the idea and ambition to write their first book-while they were still in training!

E.S. Siker, M.D., was Susan's chief at Mercy Hospital, and from the outset he supported the Dorschs' concept. While on a speaking tour, he shared the Dorschs' proposal with other anesthesiologists. He returned to Pittsburgh with news that their idea had generated genuine interest. Dr. Siker advised the couple to proceed, arguing that even if a book were never published, they would gain in depth knowledge about anesthesia equipment. Dr. Siker offered to review their manuscript and to provide photographic and medical illustration services. With secretarial help from Mercy Hospital and library assistance from the University of Pittsburgh, the Dorschs wrote a table of contents and two chapters just in time for the ASA Annual Meeting in October 1970. They approached various textbook companies, received favorable responses from two publishers, and within a few months, signed a contract with Williams and Wilkins in Baltimore.

The Dorschs completed their training in 1971 and moved to Orange Park,

Florida, where Jerry spent two years at the Naval Medical Hospital in Jacksonville. Susan worked part-time in private practice while their children were young. In 1975, the first edition of *Understanding Anesthesia Equipment* was published. The book was 311 pages, cost around \$30 and was a huge success. Subsequent editions were published in 1984, 1991, 1999 and 2008. The third and subsequent editions included a chapter on "Complications of Anesthesia Machines and Breathing Systems" and the first topic discussed was "Hypoxia."

This year's Lewis H. Wright Memorial Lecture is titled "Beyond Blue Lips: Advances in the Prevention of Hypoxia." The topic evolved from the Dorschs' interest in both anesthesia equipment and advancements in safety. Susan participated in the development of the first standard for anesthesia machines in the United States (1979).¹ Key features of this standard were the inclusion of the oxygen fail safe device; a consistent location of the oxygen flowmeter, and a unique knob for the oxygen flow control valve.

In 1982, the producers of "20/20" asked the couple to appear in a television story on the risks of anesthesia. The crew visited Jacksonville and in the actual broadcast, Susan discussed the oxygen analyzer and how it could detect a hypoxic gas mixture in the breathing circuit. The story's final clip profiled a patient who suffered intraoperative hypoxic brain injury. The show generated considerable angst among the public and some patients cancelled or delayed elective surgery after its broadcast. Although we take it for granted, oxygen analyzer use was not required in the 1980's and its introduction into anesthesia practice was a milestone in our specialty's safety initiatives.²

The Wood Library-Museum of Anesthesiology is honored to have Jerry and Susan Dorsch as the 2008 Lewis H. Wright Memorial Lecturers. *Understanding Anesthesia Equipment* has been in print since 1975. Unfortunately the fifth edition will

Lewis H. Wright Memorial Lecture: Jerry A. Dorsch, M.D., and Susan E. Dorsch, M.D., to present 'Beyond Blue Lips: Advances in the Prevention of Hypoxia' is reprinted with permission of the American Society of Anesthesiologists, 520 N. Northwest Highway, Park Ridge, Illinois 60068-2573.

Book Review

Ether and Chloroform: Their Employment in Surgery, Dentistry, Midwifery, Therapeutics, Etc., by John Foster Brewster Flagg, M.D. Philadelphia: Lindsay and Blakiston, 1851, 189 pages.

by Theodore A. Alston, M.D., Ph.D.
 Massachusetts General Hospital
 Harvard Medical School

This, the first American textbook of anesthesia, can be viewed on-line at books.google.com. Author J.F.B. Flagg (1804-1872) was a Boston Brahmin. His ancestor, John Flagg, arrived in Massachusetts in 1637, and his Brewster ancestor came over on the Mayflower. His grandfather, Josiah, was a colonel in the American Revolution. His father, Josiah, was a major in the War of 1812 and was the first dentist born in the US. His brother and guardian, Josiah (to whom the book is dedicated), was a surgeon dentist trained by John Collins Warren and was a harsh critic of the Morton-Jackson ether patent. J.F.B.'s son, Josiah, continued the family tradition of dental surgery. For some reason, the fourth famous Josiah Flagg preferred to be known as Foster instead of Josiah.

Flagg introduced etherization in Philadelphia, where he was a professor in the College of Dentistry and subsequently in the Pennsylvania College of Dental Surgery. He was joined in P.C.D.S. by Henry Isaiah Dorr. Flagg may have influenced Dorr, who became the world's first professor of anesthesia and provided the world's first endowed chair in anesthesia. (The first Dorr Professor was to be Henry K. Beecher of Mass. General.)

Written soon after Ether Day, the book depicts the history, sociology, and art of inhaled anesthesia. Flagg laments "that several candidates should have appeared simultaneously for the exclusive honour of having first induced anesthesia by inhalation." He gives shared credit to Davy, Wells, Jackson and Morton. There is a hint of sarcasm in his praise of Morton. We learn, "The bold [ether] experiments of Mr. Morton, even to the shutting off or partial exclusion of atmospheric air, and the holding of a burning candle within a few inches of the mouth of a patient while under its influence, are certainly worthy of much consideration. They serve at least to imbue us with additional confidence in its safety, when used in prudent, careful, and proper manner."

Flagg was quick to embrace etherization. He tested ether with three other phy-

sicians on Nov. 28, 1846, and used it on patients the next day. Furthermore, he had been one of the many medical students who had frolicked with ether long before Ether Day. He fondly reminisces, "Momentary or temporary mischief, indeed, occasionally occurred through excitement (not always unattended by design), such as dealing a blow upon the person of an unpopular professor." Presumably, some students tried it but never inhaled. An experimenting student who did indeed inhale was Henry J. Bigelow. Bigelow is quoted to have written, "In my own former experience, the exhilaration [from ether] has been quite as great, though perhaps less pleasurable, than that of this gas [nitrous], or of the Egyptian *haschish*." Flagg discusses the interesting question as to why it took so long to formulate the "Yankee guess" that recreational ether could be a serious aid to surgery. Authorities had held that inhaled ether was "dangerous, if carried too far." With characteristic humor, Flagg says the same could be said of a joke.

Like his brother, Flagg did not honor the Morton-Jackson patent on etherization. For one thing, Morton's prices, though graduated, were high. The asking prices for seven years of use were \$200 in cities of over 150,000 people and \$37 in cities of under 5,000.

Though etherization was hailed by many, Flagg encountered resistance. He alleges verbal and physical abuse from professional "colleagues." The unspecified physical abuse must have been mild. He wryly remarks, "The excitement occasioned by the introduction of ether inhalation for the period of two or three years, was, perhaps, as great as that attending the earlier practice of vaccination, though, as yet, I have heard of no one being actually *stoned* for resorting to its use." He goes on to say, "*Jealousy* has had a large share in introducing sulphuric ether. *Physicians* have opposed it for the very cogent reason, that it was the discovery of a dentist! *Some* repudiate it, because of its Yankee origin! and *others* condemn it, who feel their incompetency to administer it." In one attack on poor Flagg, a boy was widely held to be

deathly ill for many days after ether for a tooth extraction. The ill child proved to be the boy's brother.

Flagg found it remarkable that, despite exaggerated fears of ether, there was little opposition to chloroform, which was much abused. "Confidence was placed in chloroform as a plaything, which was denied to ether for useful purposes!" The rapid embrace of chloroform in 1848 as safer than ether is why "chloroform came to the relief of—the *enemies of anaesthesia*." Flagg claims to be the first American to question chloroform superiority. He recounts the "public shock" when a chloroform death occurred in Cincinnati, and he laments that other chloroform deaths were lamentably ascribed to etherization. However, Flagg sometimes employed chloroform, and he ascribed local anesthesia power to it (as did James Y. Simpson, who also used cyanide on the gums as a local). After drainage of a hip abscess, for instance, Flagg bound up the wound "with a simple bread poultice" into which he put 10 or 12 drops of chloroform.

John Snow had not yet provided obstetric anesthesia for Victoria, so the always-pithy Flagg argues against the religious objections to relief of the "primeval curse upon woman." In one anecdote, a doctor demanded that a nurse take an ether sponge away from a parturient. The nurse did so but deliberately spilled ether on the patient's bed-clothes in order to continue the drug.

Flagg and most others of his day preferred sponges or cloths over other anesthesia applicators. However, in order to conserve the drug in long obstetric cases, he invented a simple chloroform-containing bladder with an attached mouthpiece. The dose was potentially high.

Many contemporaries felt that partial asphyxia was a useful aid to etherization.

Flagg stressed oxygenation. He also anticipated Egbert, Battit, Turndorf, and Beecher (1963) in that he emphasized the importance of good rapport with the patient. He had his bad days though. In one difficult dental anesthetic, binding with "an entire clothes line" was just the thing.

From the Literature

by A.J. Wright, M.L.S.

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Note: I have examined most of the items listed in this column. Books can be listed here more than once as new reviews appear. Older articles are included as I work through a large backlog of materials. Some listings are not directly related to anesthesia, pain or critical care; I interpret those categories very broadly. Some will concern individuals important in the history of the specialty [i.e., Harvey Cushing or William Halsted] who also achieved in other areas or widely-used equipment. I also include career profiles of living individuals. Non-English materials are so indicated. I urge readers to send me any citations, especially those not in English, that I may otherwise miss!

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be the final text by these authors. Thousands of anesthesiologists and nurse anesthetists have read their words and studied their illustrations, and anesthesia libraries throughout the world hold this book. We thank Dr. Jerry Dorsch and Dr. Susan Dorsch for their efforts to explain the intricacies of anesthesia equipment. Their work spotlighted potential pitfalls in our early anesthesia machine designs and brought to the forefront strategies to detect and prevent hypoxia. These achievements merit a place of honor in our specialty's history.

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AHA 2009 Call for Abstracts

The 27th Annual Spring Meeting of the Anesthesia History Association will be held April 16-18, 2009, in Augusta, Georgia.

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The abstracts are for twenty-minute papers on historical aspects of anesthesia, critical care medicine, and pain management. Abstracts on medical humanities or ethical topics that relate to the history of one or more of these broad areas are also invited. Abstracts should be no longer than one 8½" by 11" sheet of paper; text should be in 12-point font size. If possible, abstracts should indicate the research problem, sources used, methodological approach and may contain no more than ten references. Abstracts may be submitted by regular mail or electronic mail (in plain text format). Disc submission in Word is also permitted. Abstracts submitted in electronic format may be made available to registrants in advance of the meeting and on the AHA WWW site as decided by the Organizing Committee. ALL accepted abstracts will be included in material distributed to meeting registrants. Individuals who wish to organize a paper session around a theme should contact the committee as soon as possible.

The submission deadline for abstracts is February 20, 2009.

Send abstracts, inquiries etc., to:
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